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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/416,308	10/12/1999	PRADEEP K. KATHAIL	CISCO-1321	5986

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EXAMINER

PHAM, HUNG Q

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 02/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/416,308

Applicant(s)

KATHAIL ET AL.

Examiner

HUNG Q PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicants amended claims 19, and 27 in the amendment received on 01/22/2003. The pending claims are 19-34. Applicants' arguments have been fully considered but they are not persuasive.

Applicants argued that:

Carcerano does not teach receiving the request from a plurality of subsystems that provide an internetwork operating system and does not teach storing an identification of a subsystem to be notified of a change of configuration data.

As stated above amended claim 19 recites receiving a notification request from one of a plurality of subsystems. The limitation further recites that each subsystem is an application that is executed to an internetwork operating system. Carcerano does not teach receiving a request from a subsystem. Instead, Carcerano teaches receiving a request from a browser. See Col. 10, lines 12-64. The browser is software being executed on a workstation connected to a server. See Fig.5. See col. 10, lines 27-28. The workstation and the server are separate processing systems. Thus, the software application from which the request is received is not a subsystem being executed by the processing unit of the router system because the subsystems are defined as being executed by the processing unit of the router system to provide an internetwork operating system. Therefore, Carcerano does not teach the claimed element of receiving a request from one of a plurality of subsystems claimed in amended claim 19. Thus, Applicants respectfully request amended claim 19 be allowed.

Furthermore, amended claim 19 recites storing an identification of the requesting subsystem in a record for requested configuration information. There is no teaching in Carcerano of storing an identification of a requesting subsystem.

Examiner respectfully traverses because of these reasons:

Regarding to claims 19 and 27, Carcerano teaches a method and product for updating a configuration of at least one of a plurality of network devices connected to a network, and the configuration data is stored in a database (Abstract). As shown in FIG. 1, Server 45 is a programmable general-purpose computer. FIG. 4 is a block diagram

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showing the internal architecture of server 45 on which runs the browser-based network management system of the invention. As shown in FIG. 4, server 45 includes central processing unit 91, which loads process steps from a computer-readable medium such as fixed disk 93 or some other source such as a network disk into main memory 95, then executes the stored process steps from main memory 95 in order to execute application programs such as an HTTP server and a network management server. Fixed disk 93 typically stores operating system 101, and a *plurality of subsystems* such as: network management protocol handler 102, and components of browser-based network management system 109 according to the invention. These components include HTTP server 103, network management server 104, database 105, CGI scripts 106, and templates 107 for HTML code according to the invention. Other applications, data and network utilities also can be stored on fixed disk 93. (Col. 7, line 56-Col. 8, line 52). As shown in FIG. 5, network management server 104 maintains database 105, which stored configuration data based on the status and configuration of network devices on network 1 by repeatedly polling the devices on network 1 through network interface 47 using network management protocols 102 (Col. 9, lines 15-22) as the step of *maintaining a configuration database*. The browser 83 as in FIG. 3 uses HTTP to communicate with HTTP server 103 running on server 45. In particular, HTTP server 103 calls CGI scripts 106 in response to URL-encoded requests from browser 83 on workstation 70, for entering an update to status and configuration information of a network device. The CGI script called by HTTP server 103 in response to that request enters those changes into database 105. Network management server 104 also looks to

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database 105 in order to determine if changes have been made to the database by the other components of browser-based network management system 109, particularly by HTTP server 103 through CGI scripts 106. If the database has been changed, network management server 104 makes appropriate changes to the status and configuration of devices on network 1 through network protocol management handler 102 and network interface 47 (Col. 9, lines 23-42). Thus, the CGI scripts 106 *receives a notification request from* HTTP server 103 as *one of a plurality of subsystems, wherein notification request is a request to receive notification of changes to configuration data of an object in said network*. In response to that request, the CGI 106 enters those changes into database 105, the network management server 104 makes appropriate changes to the status and configuration of devices on network 1 through network protocol management handler 102, or in other words, *each of said plurality of subsystems is instructions executed by said processing unit to provide an application of an internetwork operating system*. Carcerano further discloses the HTTP server 103 receives the URL-encoded requests from browser 83 and processes those requests. The URL in a request identifies one of CGI scripts 106. HTTP server 103 executes the CGI script, as discussed above, so as to dynamically generate a response to the URL-encoded request (Col. 10, lines 12-18). Thus, the technique as taught by Carcerano indicates the step of *storing an identification of said one of said plurality of subsystems in a record for said configuration data for said object identifying said one of said plurality of subsystems as requiring notification of changes to said configuration data of said object*.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**3. Claims 19, 25, 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carcerano et al. [USP 6,308,205 B1].**

Regarding to claims 19 and 27, Carcerano teaches a method and product for updating a configuration of at least one of a plurality of network devices connected to a network, and the configuration data is stored in a database (Abstract). As shown in FIG. 1, Server 45 is a programmable general-purpose computer. FIG. 4 is a block diagram

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showing the internal architecture of server 45 on which runs the browser-based network management system of the invention. As shown in FIG. 4, server 45 includes central processing unit 91, which loads process steps from a computer-readable medium such as fixed disk 93 or some other source such as a network disk into main memory 95, then executes the stored process steps from main memory 95 in order to execute application programs such as an HTTP server and a network management server. Fixed disk 93 typically stores operating system 101, and a *plurality of subsystems* such as: network management protocol handler 102, and components of browser-based network management system 109 according to the invention. These components include HTTP server 103, network management server 104, database 105, CGI scripts 106, and templates 107 for HTML code according to the invention. Other applications, data and network utilities also can be stored on fixed disk 93. (Col. 7, line 56-Col. 8, line 52). As shown in FIG. 5, network management server 104 maintains database 105, which stored configuration data based on the status and configuration of network devices on network 1 by repeatedly polling the devices on network 1 through network interface 47 using network management protocols 102 (Col. 9, lines 15-22) as the step of *maintaining a configuration database*. The browser 83 as in FIG. 3 uses HTTP to communicate with HTTP server 103 running on server 45. In particular, HTTP server 103 calls CGI scripts 106 in response to URL-encoded requests from browser 83 on workstation 70, for entering an update to status and configuration information of a network device. The CGI script called by HTTP server 103 in response to that request enters those changes into database 105. Network management server 104 also looks to

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database 105 in order to determine if changes have been made to the database by the other components of browser-based network management system 109, particularly by HTTP server 103 through CGI scripts 106. If the database has been changed, network management server 104 makes appropriate changes to the status and configuration of devices on network 1 through network protocol management handler 102 and network interface 47 (Col. 9, lines 23-42). Thus, the CGI scripts 106 *receives a notification request from* HTTP server 103 as *one of a plurality of subsystems, wherein notification request is a request to receive notification of changes to configuration data of an object in said network*. In response to that request, the CGI 106 enters those changes into database 105, the network management server 104 makes appropriate changes to the status and configuration of devices on network 1 through network protocol management handler 102, or in other words, *each of said plurality of subsystems is instructions executed by said processing unit to provide an application of an internetwork operating system*. Carcerano further discloses the HTTP server 103 receives the URL-encoded requests from browser 83 and processes those requests. The URL in a request identifies one of CGI scripts 106. HTTP server 103 executes the CGI script, as discussed above, so as to dynamically generate a response to the URL-encoded request (Col. 10, lines 12-18). Thus, the technique as taught by Carcerano indicates the step of *storing an identification of said one of said plurality of subsystems in a record for said configuration data for said object identifying said one of said plurality of subsystems as requiring notification of changes to said configuration data of said object*. Carcerano does not explicitly teach that Server 45 is *a router device*. However, Carcerano discloses that Server 45 for managing



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network devices can be any other type of data processing equipment that can access network 1 and that can run the browser-based network management system according to the invention (Col. 5, lines 59-67). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product by implementing the technique of notifying configuration data in a router device and by the modification, configuration data could be viewed and updated via a user's request.

Regarding to claims 25 and 33, Carcerano teaches all the claimed subject matters as discussed in claims 19 and 27, Carcerano further discloses the step of *receiving a remove notification request from said one of said plurality of subsystems, wherein said remove notification request is a request to remove said one of said plurality of subsystems from said plurality of subsystems to be notified in response to a change in said configuration data, and removing said identification of said one of said plurality of subsystems from said record of said configuration data storing subsystems to be notified of a change in said configuration data* (FIG. 5, Col. 8-12).

**4. Claims 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carcerano et al. [USP 6,308,205 B1] in view of Civanlar et al. [USP 6,078,963].**

Regarding to claims 20 and 28, Carcerano teaches all the claimed subject matters as discussed in claims 19 and 27, Carcerano further discloses: *receive a change in said configuration data of said object* (Carcerano, Col. 10, lines 35-47 and Col. 9, lines 34-42), but fails to teach the step of *reading said identification of said one of said plurality of subsystems from said record of said object receiving to receiving said change of said configuration data, and transmit a notification of said change of configuration data of said object to said one of said plurality of subsystems responsive to said reading of said identification*. Civanlar teaches an improved network router having a plurality of intelligent router ports and each intelligent router port may have its own routing and/or forwarding engines (Civanlar, Abstract). Civanlar further discloses the step of *reading said identification of said one of said plurality of subsystems from said record of said object receiving to receiving said change of said configuration data, and transmit a notification of said change of configuration data of said object to said one of said plurality of subsystems responsive to said reading of said identification* (Civanlar, Col. 3, line 53-Col. 4, line 7 and Col. 7, lines 43-65). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product and method by including the step of reading identification and transmitting notification of change of configuration data to subsystem in order to distribute configuration data over a network.

5. Claims 21-24, 26, 29-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carcerano et al. [USP 6,308,205 B1] in view of Tabuchi [USP 6,446,093].

Regarding to claims 21 and 29, Carcerano teaches all the claimed subject matters as discussed in claims 21 and 27, Carcerano further discloses the step of *retrieving a record storing said configuration data for said object responsive to receiving said notification request* (Carcerano, FIGS. 6-7, Col. 11-13), but fails to teach the step of *setting a notification flag in said record*. Tabuchi teaches a distributed system comprising a document server and a plurality of clients, which are connected to the document server via a network and a method of managing a document shared in the distributed system (Tabuchi, Col. 1, lines 5-10). Tabuchi further discloses the step of setting a notification flag in a record (Tabuchi, Col. 6, lines 15-54). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product and method by including the technique of setting a notification flag as taught by Tabuchi, and by doing this, a record could be controlled and managed via access right.

Regarding to claims 22 and 30, Carcerano and Tabuchi teaches all the claimed subject matters as discussed in claims 21 and 29, Carcerano further discloses the step of *receiving a change to said configuration data of said object retrieving said record of said object* (Carcerano, Col. 10, lines 35-47 and Col. 9, lines 34-42), but fails to teach the step of *reading said notification flag*. Tabuchi teaches a distributed system comprising a document server and a plurality of clients, which are connected to the document server via a network and a method of managing a document shared in the distributed system

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(Tabuchi, Col. 1, lines 5-10). Tabuchi further discloses the step of reading notification flag (Tabuchi, Col. 26, lines 27-28). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product by including the step of reading notification flag, and by including the step of reading, a record could be controlled and managed for modifying via access right.

Regarding to claims 23 and 31, Carcerano and Tabuchi teaches all the claimed subject matters as discussed in claims 21 and 29, Carcerano further discloses the step of *determining said notification request is configuration data of a name space, retrieving each child record of said record* (Carcerano, FIGS. 6-7, Col. 11-13), but fails to teach the step of *setting a notification flag in each said child record*. Tabuchi teaches a distributed system comprising a document server and a plurality of clients, which are connected to the document server via a network and a method of managing a document shared in the distributed system (Tabuchi, Col. 1, lines 5-10). Tabuchi further discloses the step of setting a notification flag in a record (Tabuchi, Col. 6, lines 15-54). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product and method by including the technique of setting a notification flag in a child record as taught by Tabuchi, and by doing this, a child record could be controlled and managed via access right.

Regarding to claims 24 and 32, Carcerano and Tabuchi teaches all the claimed subject matters as discussed in claims 23 and 31, Carcerano further discloses the step

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*of receiving a change to configuration in a child record, retrieving said child record responsive to receiving said change, and transmitting notification of said change of said change to said one of said plurality of subsystems identified in said parent record* (Carcerano, FIGS. 6-7, Col. 11-13), but fails to teach the step of *reading said notification flag in said child record responsive to retrieving said record, reading a parent record of said child responsive to reading said notification flag*. Tabuchi teaches a distributed system comprising a document server and a plurality of clients, which are connected to the document server via a network and a method of managing a document shared in the distributed system (Tabuchi, Col. 1, lines 5-10). Tabuchi further discloses the step of reading notification flag (Tabuchi, Col. 26, lines 27-28). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano product by including the step of reading notification flag in child also parent record, and by including the step of reading, a record could be controlled and managed for modifying via access right.

Regarding to claims 26 and 34, Carcerano teaches all the claimed subject matters as discussed in claims 25 and 33, Carcerano fails to disclose the step of *determining whether said configuration data for which said remove notification request is for a name space, retrieving each child record of said record of said configuration data responsive to a determination said configuration data is a name space, and removing a notification flag, from each said child record*. Tabuchi teaches a distributed system comprising a document server and a plurality of clients, which are connected to the document server

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via a network and a method of managing a document shared in the distributed system (Tabuchi, Col. 1, lines 5-10). Tabuchi further discloses the step of *determining whether said configuration data for which said remove notification request is for a name space, retrieving each child record of said record of said configuration data responsive to a determination said configuration data is a name space, and removing a notification flag, from each said child record* (Tabuchi, Col. 6, line 15-Col. 9, line 28). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Carcerano method by including the step of removing notification flag from the child record after retrieving the child record, and by including the step of removing and retrieving, a record could be controlled and managed for modifying via access right.

### **Conclusion**

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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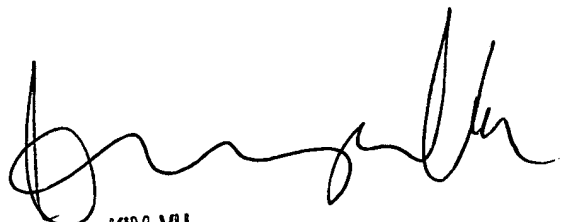
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Pham whose telephone number is 703-605 4242. The examiner can normally be reached on Monday-Friday, 7:00 Am - 3:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VU, KIM YEN can be reached on 703-305 4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746 7239 for regular communications and 703-746 7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305 3900.

Examiner: Hung Pham  
February 20, 2003



KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100